Additional chart coverage may be found in CATP2, Catalog of Nautical Charts. $SECTOR~{\color{red}{\bf 2}} -- CHART~INFORMATION$

SECTOR 2

WHITE SEA

Plan.—This sector describes Dvinskiy Zaliv, Onezhskiy Zaliv, and Kandalashskiy Zaliv. The descriptive sequence is from E to W.

Dvinskiy Zaliv

2.1 Dvinskiy Zaliv (65°00'N., 39°00'E.) is entered between Mys Zimnegorskiy, on the E side, and Mys Gorbolukskiy on the W side, 70 miles WSW. Reka Severnaya Dvina, which enters the SE corner of the gulf through an extensive delta, is the largest river to flow into the White Sea. The river is navigable by large vessels as far as the port of Arkhangel'sk.

Winds—Weather.—In Dvinskaya Guba, the prevailing wind is SW from September to November, and SE from December to April; from May to August, the wind enters the gulf from Gorlo and after rounding Zimniy Bereg becomes NW. The area is free of fog.

At the entrance to Onezhskiy Zaliv, strong NE winds pass over Ostrov Solovetskiy and into Solovetskiy Zaliv in violent N to ENE squalls. When there is an E to SE wind at sea, it is either calm in the bay or there is a gentle E to S wind, especially in fine weather. In general, Onezhskiy Zaliv has a mild climate, due to the shelter afforded it by the numerous high islets and its shores. During the winter, the prevailing winds are from the SE; during the summer, they are from a NW direction.

Caution.—A Traffic Separation Scheme has been established off Mys Zimnegorskiy and may best be seen on the chart

Recommended tracks, which are shown on the chart, lead N and SE from the traffic lanes.

The above scheme is not IMO-adopted. However, the Russian authorities state that Rule 10 of The International Regulations for Preventing Collisions at Sea (1972) applies.

Areas within which explosives are submerged and anchoring, bottom fishing, and submarine works are prohibited, lie in the waters described by this sector and may best be seen on the chart.

East Side of Dvinskiy Zaliv

2.2 Mys Kerets (65°20'N., 39°43'E.), the extremity of which is low and covered with grass, lies 9 miles S of Mys Zimnegorskiy. A light is shown from the point. The depths lying up to 1 mile off Mys Kerets are very irregular, and the point should be given a wide berth. Reyd Keretskiy, a roadstead lying about 1 mile W of Mys Kerets, provides good anchorage for large vessels. An obstruction, with a depth of 11m, lies 1.5 miles WSW of the point and 2 miles E of the traffic separation scheme.

Reka Bol'shiye Kozly (65°15'N., 39°53'E.) enters the sea 6.5 miles SSE of Mys Kerets. The river is accessible to boats at HW. A village stands on the N bank of the river close within its

mouth. Good anchorage can be obtained 1.5 miles offshore with the village bearing 090° and the high bluff of Mys Kerets bearing 146°, in a depth of 18m, mud.

A prominent beacon, 24m high, stands near the shore, 3.8 miles SE of Reka Bol'shiye Kozly.

Mys Kuyskiy (65°06'N., 40°03'E.), a wooded point, lies 16 miles SE of Mys Kerets. A light is shown from a structure, 22m high, standing on the point.

Caution.—An obstruction is reported to lie 7 miles SSW of the light.

A magnetic anomaly is reported to exist in an area lying 8.5 miles WNW of the point.

2.3 Reka Kuya (65°05'N., 40°06'E.) is entered S of a low, sandy point, 1.5 miles SE of Mys Kuyskiy. The mouth of the river is obstructed by a sand bar. A village, with a large wooden building, stands on the S side of the mouth of the river. Anchorage may be obtained by large vessels in depths of 13 to 15m, about 2 miles off the mouth of the river.

Ostrov Mud'yugskiy (64°55'N., 40°14'E.) lies with its N end 8 miles SSE of Mys Kuyskiy light. The interior of the island is low with sloping hummocks and is covered with bushes and pine trees. A light, equipped with a radiobeacon and a racon, is shown from the middle of the W side of the island. A conspicuous monument stands near the S end of the island. Range lights, indicating the approach to Arkhangel'sk, are situated at the SW end of the island.

Guba Sukhoye More (64°55'N., 40°19'E.), lying between the E side of Ostrov Mud'yugskiy and the mainland, dries in its middle part and is otherwise shallow throughout. A number of rivers empty into Guba Sukhoye More.

Arkhangel'sk (64°32'N., 40°31'E.)

World Port Index No. 62800

2.4 The port area of Arkhangel'sk (Archangel) comprises the facilities and navigable waterways of the delta of Reka Severnaya Dvina, which discharges into the head of Dvinskiy Zaliv. The port is situated on the E bank of the river at the head of the delta, about 28 miles from the sea buoy at Berezovyy Bar. The delta of Reka Severnaya Dvina has three principal arms or branches, with navigable channels leading to Arkhangel'sk. The arms of the delta lie between numerous islands. The outer islands are low and are almost covered during high tides. There are several large villages on some of these islands.

The port is one of the most important, if not the largest, in Russia. The total length of the port area is about 30 miles, extending from the N end of Ostrov Mud'yugskiy to some wharves on Reka Severnaya Dvina, 6.5 miles SE of the city. It is primarily a timber and timber products exporting port, although general cargoes are handled as well.

Ice.—The port is normally open from the end of April through November, but can be used by ice-classed vessels all year with icebreaker assistance.

Tides—Currents.—Tides rise about 1.3m at springs and 1.1m at neaps.

Depths—Limitations.—The port provides a total of 35 berths with depths of 7.7 to 9.6m alongside. The least depth in the entrance fairway is 6.8m (1992). The least depth in the E part of Nikol'skiy Rukav is 5.2m (1992).

There are facilities for general cargo, timber, bulk, tanker, and container vessels. Vessels up to 19,200 dwt, 175m in length, 30m beam, and 8m draft can be accommodated. The maximum draft is subject to change throughout the year due to silting and natural phenomena. Tankers are limited to a draft of 7.08m.

During the winter, when an icebreaker has to provide a clear channel, vessels are limited to a length of 165m.

See Regulations for information concerning height limits.

Aspect.—Range lights, situated on Ostrov Mud'yugskiy, indicate the approach to the main channel. A racon is situated at each range light. This range indicates the channel leading over the bar.

Approach Lighted Buoy No. 1 is moored in position 64°56'48"N, 40°05'36"E.

Pilotage.—Pilotage is compulsory for all the waterways of Reka Severnaya Dvina. Pilots can be contacted by VHF and board in the vicinity of Approach Lighted Buoy No. 1. Pilotage is undertaken by day and at night.

Vessels should send an ETA and a request for pilotage 24 hours in advance through INFLOT and confirm it 4 hours before arrival. In the event of bad weather or waiting for HW, vessels may anchor NW of Approach Lighted Buoy No. 1. Pilots may also direct vessels to other suitable areas for boarding.

Vessels entering and departing the port should obtain permission by VHF from the Traffic Control Service (SUDS). All vessels should maintain a continuous VHF listening watch.

During the winter when vessels are to be led by icebreakers, an ETA message must be forwarded through INFLOT to the Port Director at least 24 hours in advance. This message must include the ETA at the ice edge, vessels's ice strength category, length, beam, main engine power, and the material from which the propeller is made.

The local weather bureau broadcasts on VHF channel 26 at 1100LT the actual weather conditions (at 0900 LT) with a forecast for the current day. It also broadcasts at 1700 LT the actual weather conditions (at 1500 LT) with a forecast for the next 24 hours. Storm warnings are also broadcast.

Regulations.—The maximum speed at which vessels may proceed is, as follows:

- 1. Mud'yugskiy Lighted Buoy No. 1 to the N end of Reka Maymaksa—12 knots.
- 2. North end of Reka Maymaksa to the S end of Reka Maymaksa—7 knots.
 - 3. South end of Reka Maymaksa to Bakaritsa—8 knots.
 - 4. In Reka Kuznechikha—6 knots.
 - In Nikol'skiy Rukav—7 knots.
 - 6. In all roadsteads and quay zones—5 knots.

A one-way traffic system operates in the main channel, as follows:

- 1. Across Berezovyy Bar and in Reka Maymaksa—Vessels exceeding 125m in length or with drafts greater than 7.5m.
- 2. In Reka Kuznechikha—Vessels exceeding 125m in length or with drafts greater than 6.5m.

No passing is permitted with the exception of small ferry boats and recreation craft.

A railroad bridge spans the river 2.2 miles ESE of the SE end of Ostrov Kego. The central span, which is 70m wide, can be raised to allow the passage of vessels with masthead heights of more than 14m, but less than 40m. Vessels with masthead heights of less than 14m may use the other navigable spans of the bridge. Generally, the central span is raised once daily between 0120 and 0320 hours for the passage of vessels. Permission to pass through the central span must be requested from SUDS no later than 1700 hours the preceding day. Cancellation of a request must be made by 0030 hours.

During periods of winds over Force 6 or air temperatures below -30°C, the central span is not raised. During spring floods, the maximum masthead height above mean sea level may be significantly reduced.

Two road bridges cross the river about 2.5 miles above the railway bridge. The bridge on the E side provides no passage for large vessels. The bridge on the W side has a central span, which is raised once daily between 0100 and 0430 hours. This bridge provides passage for vessels up to 135m in length with masthead heights of more than 14m, but less than 40m. Times for requesting permission etc. are the same as for the railway bridge.

Overhead cables, with a minimum vertical clearance of 43m, span the river.

Anchorage.—Vessels awaiting a pilot, the tide, or other requirements, can anchor in depths of 7 to 9m, sand and mud, off the entrance to the main channel. The best berth lies W of Mud'yugskiye Range and with Mud'yugskiy Light bearing not less than 110°.

Anchorage may be obtained 0.4 mile SW of Mys Yuzhnyy (64°51'N., 40°17'E.) in depths of 7 to 10m. Gorodskiy Reyd, off Arkhangel'sk, offers excellent anchorage in depths of 7 to 18m. Vessels can also anchor above the roadstead, but clear of the range.

Directions.—The channel for deep-draft vessels leads over Berezovyy Bar and through Vkodnoy Korabel'nyy Farvater. It passes through Reka Maymaksa, which rejoins Korabel'nyy Rukav at the S end of Ostrov Brevennik, and then leads S to Arkhangel'sk. The fairway is marked by buoys.

Caution.—The coasts of the mainland, the islands, the banks, and the depths in the channel are subject to great changes which are caused by erosion by ice and by the deposit of silt from the river.

Numerous timber yards are situated along the banks of the narrows and the width of the channel may be reduced, in places, by rafts and logs.

Several submarine cables and pipelines lie within the harbor waters and may best be seen on the chart. The pipelines are not always buried and, in places, may reduce the charted depth by up to 2m.

West Side of Dvinskiy Zaliv

2.5 Severodvinsk (Molotovsk) (64°34'N., 39°47'E.) (World Port Index No. 62810) is a harbor situated close within the entrance of a channel leading between the S end of Ostrov Yagry and the mainland. The port is not open to foreign shipping. A bar lies off the entrance to the channel and has depths of 1.5 to 2.7m. Three range lights indicate the approach from Dvinskiy Zaliv to the entrance channel. Local knowledge is required.

Reka Solza (64°32'N., 39°34'E.) discharges into the head of a bight and lies 5 miles W of Severodvinsk. Boats can only enter this river at high tide. A village, in which stands a conspicuous church, is situated on the W bank of the river, 0.8 mile within the entrance.

Mys Tolstik is a steep, bluff point located 9.5 miles NW of the entrance to Reka Solza. A light is shown from this point.

Reka Syuz'ma (64°42'N., 39°01'E.) flows out from between sloping hills, 7 miles WNW of Mys Tolstik. This river is accessible to boats at HW. A village, situated close within the W entrance point of the river, is visible from seaward. A light is shown from a structure standing 0.8 mile W of the W entrance point of the river.

Krasnaya Gora (64°46'N., 38°36'E.), a village, stands 11 miles WNW of the mouth of Reka Syuz'ma. A light is shown from a structure standing 0.5 mile E of the village. Mys Krasnogorskiy Rog is located 5 miles WNW of Krasnaya Gora.

Unskaya Guba (64°45′N., 38°10′E.), a large shallow basin, is entered between Mys Krasnogorskiy Rog and Mys Yaren'gskiy Rog, 2.5 miles NW. The E shore of the entrance to this inlet is high and the W shore is low. A light is shown from a structure standing 1 mile SW of Mys Yaren'gskiy Rog. Unskaya Guba provides the most sheltered anchorage on Letniy Bereg and can be entered at half tide by vessels with drafts of up to 3.5m. Vessels should not proceed into this inlet without local knowledge.

2.6 Yaren'ga (64°53'N., 37°56'E.), a village, is situated 11 miles WNW of Mys Yaren'gskiy Rog. It stands at the mouth of a river of the same name, where a sandy beach is prominent. Two churches stand close W of the village. Vessels can anchor off the village by proceeding on the range formed by the two churches in line, bearing 200°, or with the N church bearing 252°

Lopshen'ga (64°58'N., 37°41'E.), a village, stands 8.5 miles NW of Yaren'ga and a prominent white church is situated in it. This village stands 1 mile NW of the mouth of the river of the same name. A rocky shoal, with a least depth of 4.9m, lies 1.2 miles ENE of the church. A light is shown from a structure standing 3.5 miles NNW of the village.

Mys Gorbolukskiy (65°10'N., 37°01'E.), the SW entrance point of Dvinskiy Zaliv, is a blunt headland, with sloping rocky sides, which is easily identified from seaward. Letniy Navolok Light is shown from a structure standing on a point 1.8 miles ESE of this headland. Shoals, with depths of 9.6 and 12m, lie 4 miles N and 4 miles E, respectively, of this light.

Caution.—When proceeding NW along the SW side of Dvinskiy Zaliv, vessels should guard against the tidal currents which usually set strongly toward the coast.

A dangerous wreck lies in the turning basin at Ekonomiya. Firing Area No. 52, located NE of Lopshen'ga, is bounded by lines joining the following positions:

- a. 65°08.0'N, 38°11.0'E.
- b. 65°08.0'N, 38°04.0'E.
- c. 65°16.0'N, 37°37.6'E.

Onezhskiy Zaliv

2.7 Onezhskiy Zaliv (64°25′N., 36°25′E.), the southernmost indentation of the White Sea, lies about 100 miles SE of the entrance and has an average width of about 30 miles. A number of islands lie in the entrance to this gulf, Ostrov Solovetskiy being the largest. Numerous islets, rocks, and shoals also lie on each side of the gulf.

East Side of Oneshzkiy Zaliv

2.8 Ostrov Zhizhginskiy (65°12'N., 36°49'E.), located 5 miles WNW of Mys Gorbolukskiy, has a steep and rocky coast. A light, equipped with a radiobeacon, is shown from a structure standing near the middle of the island. Several buildings stand on the island. Range lights, bearing 133°, are shown from structures standing on the NW side of the island. This lighted range indicates the approach to an anchorage which lies about 0.4 mile NW of the front range structure.

Ostrov Churnavolok, an islet, lies at the extremity of a drying reef which extends 1.5 miles NNE from Ostrov Zhizhginskiy. A light is shown from this islet and a lighted buoy is moored about 2 miles N of it.

Proliv Zhizhginskaya Salma (65°10'N., 36°50'E.), lying between Ostrov Zhizhginskiy and the mainland to the SE, is much encumbered by banks and shoals. A narrow and winding channel may be used at all stages of the tide by vessels with local knowledge and drafts not exceeding 5m. The fairway in this channel is marked by navigational aids.

2.9 Proliv Vostochnaya Solovetskaya Salma (65°05'N., 6°30'E.) is a strait, the E side of which is formed by the E shore of Onezhskiy Zaliv between Mys Ukhtnavolok and Mys Letniy Orlov. The W side of the strait is formed by the E ends of Ostrov Anzerskiy, Ostrov Bol'shaya Muksalma, and Ostrov Malyy Muksalma.

Guba Letnyaya Zolotitsa (64°58'N., 36°47'E.) is an indentation lying 11 miles S of Mys Ukhtnavolok. A river, with a village standing near its mouth on the N bank, discharges into the head of this bay, which is fringed by a conspicuous sandy beach. Vessels can anchor in depths of 13 to 16.5m about 0.7 mile NW of the mouth of the river.

Guba Konyukhova (64°55'N., 36°36'E.), a bay, is entered between Mys Tolstyye Korgi and a point, 3.5 miles W, and has pine trees extending to the water's edge. Good anchorage can be obtained in the bay during gales from E through S to SW. The bay also provides a favorable anchorage in early spring when ice is being carried out of Onezhskiy Zaliv.

Mys Letniy Orlov (64°55'N., 36°27'E.) lies 17 miles SW of Mys Ukhtnavolok and is prominent from the N and S. A light is shown from this point and a lighted buoy is moored about 0.8 mile W of it.

A pilot station is situated on the point. Pilots for Guba Pushlakhta and Onega are available and embark 1.5 miles W of the above lighted buoy. Pilots may be contacted by VHF. Vessels should send an ETA 48 and 24 hours in advance and a confirmation 4 hours before arrival. The station only operates during the navigation season.

2.10 Ostrov Anzerskiy (65°09'N., 36°06'E.) is the easternmost of a group of islands which lies in the entrance to Onezhskiy Zaliv. This island lies with its E extremity located 14 miles W of Mys Ukhtnavolok. A light is shown from a structure standing 1.2 miles WSW of Mys Kolguyev, the E extremity of the island. A conspicuous church stands 6 miles W of Mys Kolguyev. A number of reefs and shoals, some marked by buoys, lie off the shores of the island and can best be seen on the chart.

Caution.—Firing Area No. 51, located NE of Ostrov Anzerskiy, is bounded by lines joining the following positions:

- a. 65°11.6'N, 36°29.0'E.
- b. 65°16.0'N, 36°24.0'E.
- c. 65°16.0'N, 36°38.6'E.

Proliv Anzerskaya Salma (65°07'N., 35°57'E.) lies between Ostrov Anzerskiy and Ostrov Solovetskiy. The fairway channel has a least charted depth of 5.8m in the narrow passage leading between Vtoroy Troitskiy Stamik and the foul ground extending from the NE end of Ostrov Solovetskiy. Drying rocks lie 2.5 miles NNE and 1.2 miles ENE of Mys Rebalda.

A shoal, with a depth of 4.4m, lies 3.5 miles WSW of Mys Kapel'skiy and close W of the center of the fairway. Another shoal, with a depth of 5.2m, lies 1.8 miles W of the same point.

During E winds, vessels can anchor in the N part of the strait in depths of 29 to 36m, about 0.5 mile off the W coast of Ostrov Anzerskiy. However, vessels should not anchor in depths of less than 18m as inside this depth there may be submerged rocks. With NE winds, the best anchorage is off Mys Plotische, the SW extremity of Ostrov Anzerskiy, in depths of 13 to 29m, sand and mud.

2.11 Ostrov Solovetskiy (65°05'N., 35°40'E.) is 13 miles long and nearly 9 miles wide. It is the largest island lying in the entrance to Onezhskiy Zaliv. The shores of the island are mostly low, wooded, and fringed by rocks which dry and extend up to 0.2 mile seaward in places.

Solovetskiy Light is shown from the cupola of a church which stands on a hill in the NW part of the island. A number of small islands and islets lie off the SW side of this island and can best be seen on the chart.

Ostrov Bol'shaya Muksalma (65°02'N., 35°58'E.) lies close E of the E side of Ostrov Solovetskiy, to which it is joined by a stone bridge. A light is shown from the SE side of this island and an islet lies close off the S end. Small vessels, with drafts of less than 3m, can anchor in a roadstead lying off the SW side of the island.

Proliv Zapadnaya Solovetskaya Salma (65°05'N., 35°12'E.) separates Ostrov Solovetskiy from the S end of Karel'skiy Bereg and is entered between Mys Perech-Navolok and Ostrov Kamostrov, 21 miles W. This strait has general depths of 13 to 39m. The least depth in the strait, which is

formed by a 9m shoal patch, lies about 3.2 miles W of Ostrova Topy Light.

Anchorage can be obtained inside the shoals lying off the W coast of Ostrov Solovetskiy, in depths of 13 to 18m, good holding ground.

2.12 Pushlakhotskaya Mel' (64°52'N., 36°20'E.), a shoal with depths of less than 10m, extends 5 miles from the coast between Mys Letniy Orlov and Mys Tonkiy. Buoys mark the S and N extremities of this shoal and lighted buoys mark the E and W extremities.

Guba Pushlakhta (64°49'N., 36°30'E.), which extends 2.5 miles SE, indents the coast midway between Mys Letniy Orlov and Mys Chesmenskiy. A village stands near the head of this cove. Lighted beacons indicate the channel leading into the cove, which is used by small vessels. Guba Pushlakhta and Mys Tonkiy can be identified by a conspicuous depression in the coastal hills in this vicinity.

Mys Chesmenskiy (64°43'N., 36°33'E.) lies 6.5 miles S of Mys Tonkiy and is covered with trees. A light is shown from a tower on a house, 19m high, standing close within the point. A radiobeacon is situated close W of the light. Mys Kamennyy lies 8 miles SE of Mys Chesmenskiy.

Stamik Bakan, a small shoal patch, lies 8.5 miles SW of Mys Kamennyy. It has a least depth of 2.9m and is marked on its E side by a lighted buoy. Stamik Gryaznogubskiy, with a least depth of 6.2m, lies 5 miles WNW of Stamik Bakan. The sea breaks over these shoals when there is a swell.

2.13 Lyamtsa (64°27′N., 37°04′E.), a village, stands on the N side of the mouth of a river of the same name and is marked by a light. The river can only be entered by small craft. An anchorage roadstead, with depths of 6 to 8m, lies 1.5 miles SW of the light and is marked by a buoy.

Lyamitskiye Stamiki, lying 8 miles SW of Lyamtsa, consists of two steep-to rocks located about 1 mile apart. The sea breaks over these rocks when there is a swell. The NW rock has a least depth of 1.4m and the SW rock has a least depth of 1.8m. A lighted buoy is moored about 1.5 miles E of the NW rock.

Peschano-Navolokskaya Mel' (64°19'N., 37°13'E.), a large and sandy shoal, has a least depth of 1.6m and lies 2.5 miles WSW of Mys Glubokiy. A buoy is moored close off the S side of this shoal.

Ostrov Pulonets (64°13'N., 37°04'E.), 3m high, lies 10 miles SW of Mys Glubokiy. This rock, from which a light is shown, is steep-to except for a shoal patch, with a depth of 8m, lying close N of it.

Ostrov Purluda (64°14'N., 37°21'E.), lying 5 miles S of Mys Glubokiy, consists of two bare and steep islets. These islets are 24m high and connected by a rocky, drying ridge. A light is shown from the N islet.

Ostrova Osinka (64°31'N., 35°14'E.), a group of islets, lies from 5.5 to 8 miles SSE of Ostrov Pulonets and is marked by a light. Ostrov Lesnaya Osinka is the northernmost islet of this group.

2.14 Purnema (64°23'N., 37°26'E.), a village, is situated 3 miles NE of Mys Glubokiy and has a prominent white church. A river enters the sea 0.5 mile E of this church. A buoy is

moored about 2.5 miles S of the church. Anchorage can be obtained off the village in depths of 6 to 12m, in the vicinity of the above buoy. This anchorage affords shelter during NW gales.

Mys Veynavolok, surmounted by a beacon, is located 6.5 miles E of Mys Glubokiy.

Guba Ukhta (64°23'N., 37°43'E.) is entered between Mys Veynavolok and a point, 4.5 miles E. It has low, sandy shores which are covered with grass and partly wooded. The entrance to this bay has a depth of 3.4m, but the depths decrease rapidly toward the head. The bay freezes over at the end of November and starts to clear of ice at the beginning of May.

Guba Kyandskaya (64°17'N., 37°57'E.) lies 8 miles SE of Guba Ukhta. A river flows into the head of this inlet and a village stands 3 miles above its mouth. Small craft can enter the river at HW.

Reka Tamitsa, a river accessible only to small craft, lies with its mouth located 8.5 miles S of Guba Kyandskaya. A village stands 1 mile within the entrance of this river.

2.15 Reka Onega (63°55'N., 38°01'E.), flowing between low marshy banks, enters Onezhskiy Zaliv between Mys Pikhnemskiy and Mys Pil'skiy, 1.2 miles SSW. Vessels can proceed to the entrance of this river through Karel'skiy Farvater. Several ranges indicate the fairways in the strait and the river. Reka Onega and its entrance freeze over about the beginning of November and clear again during the end of April and the first part of May. Vessels cannot winter in the river as there is no protection against drifting ice.

Ostrova Shogly (64°02'N., 37°47'E.), a group consisting of three small islets, lies 8.2 miles NW of the entrance to Reka Onega. A light is shown from the northernmost islet of the group. A dangerous wreck lies about 1 mile SSW of the light. Banka Shoglyanka, a rock, lies about 4 miles NW of the light. It has a least depth of 0.8m and is marked by a buoy. A number of islets and shoals lie close SE of Ostrova Shogly and can best be seen on the appropriate chart.

Dvinskiy Reyd (64°03'N., 37°53'E.), the roadstead area located off the entrance to Reka Onega, lies E of Ostrova Shogly and has general depths of 5 to 7m. Anchorage can be taken 2 miles E of Ostrova Shogly Light in a depth of 5m, or closer to the islets in a depth of 4m.

Karel'skiy Reyd (63°59'N., 37°38'E.) lies 5 miles SW of Ostrova Shogly. Anchorage can be obtained in a depth of 7m about 4 miles SW of Ostrova Shogly Light. The coastal bank lying E of this anchorage is marked by two buoys.

Karel'skiy Farvater (63°57'N., 37°42'E.) leads E from Kare'skiy Reyd and over the bar of Reka Onega. The fairway of this strait, which is 60m wide, is marked by lighted ranges, lighted buoys, and spar buoys. The maximum drafts of vessels navigating this fairway is 5.1 to 6.4m, the precise figure being promulgated at the start of the navigation season. Vessels are advised to contact the harbormaster to inquire about least depths in the fairway before entering the river.

2.16 Onega (63°54'N., 38°06'E.) (World Port Index No. 62820) is situated on the right bank of the Onega River. It is the only port open to foreign shipping in Onezhskiy Zaliv. The harbor, lying 4 miles from the mouth of the river, is usually

open to navigation from May to September. The town of Onega stands on a bluff projection on the N bank of the river and is a center for timber handling and sawmilling. General cargoes can also be handled.

Tides—Currents.—The tides at the port rise about 1.1m at springs and 0.7m at neaps.

Depths—Limitations.—Opening and closing of the port is usually regulated by the port authorities. Access into the river is via Karel'skiy Farvater. Generally, vessels of up to 125m in length, 18m beam, and 6.1m draft can enter at HWS.

Export Wharf, which is also known as Sawmill No. 32 Wharf, lies close within the entrance of the river. It provides 470m of berthage with depths of 3.2 to 5.6m alongside. Vessels, with drafts of up to 6.1m, can berth at pontoons secured alongside the wharf at LW. Sawmill No. 33 Wharf is 110m long and has a depth of 4m alongside.

The exact allowable draft for entry is broadcast at the beginning of each navigation season.

Pilotage.—Pilotage is compulsory. Pilots can be contacted by VHF and board off Mys Letniy Orlov. Vessels should send an ETA to the pilot station at least 24 hours in advance.

Regulations.—Vessels with drafts not exceeding 3m may enter the port at any time. Vessels with drafts of over 3m may enter only 1 hour before HW.

The speed of vessels having the maximum draft should not exceed 8 knots.

The movement of vessels within the port area is prohibited during restricted visibility.

Inbound vessels with maximum drafts must give way to outbound vessels with maximum drafts. Overtaking in the fairway is prohibited.

Anchorage.—Anchorage can be taken on the alignment of Gorodskiy Range and abreast the front beacon of Mys Pikhnemskiy No. 2 Range, in depths of up to 4m, mud and stones. Anchorage can also be taken off Export Wharf on the alignment of Gorodskiy Range, in depths of up to 4m.

West Side of Onezhskiy Zaliv

2.17 Guba Nimen'ga (63°51'N., 37°27'E.), a large bay, lies 9 miles SW of Karel'skiy Farvater outer sea buoy. This bay is shallow, with extensive drying flats, and landing is dangerous. Anchorage, during offshore winds, can be obtained in a depth of 5.8m in Kusheretskiy Reyd with Ostrov Paskanets bearing 301°, distant 2.2 miles.

Between Mys Vazhen Navolok, the W entrance point of Guba Nimen'ga, and Mys Vardiya, 26 miles WNW, the coast is indented by a number of bays, all of which are mostly filled with drying flats. A number of islands, islets, rocks, and shoal patches lie offshore between these two points and can best seen on the chart.

Guba Vekhruyka (64°05'N., 36°13'E.) is a bay which dries. It is entered between Mys Ponomarev Nos (64°07'N., 36°15'E.) and Mys Vardiya, a steep point 4.2 miles S.

Guba Kolezhemskaya lies 10 miles NW of Guba Vekhruyka and is entered between Mys Chiznavolok and Mys Krasnoshchel'ye, 4.5 miles NW. The village of Kolezhma stands at the mouth of a river which flows into the W side of this bay.

2.18 Ostrov Myagostrov (64°21'N., 35°58'E.), the largest island along this part of the coast, lies 3.5 miles N of Mys Krasnoshchel'ye. The passage leading between this island and the coast is obstructed by several islets and rocks, and dries at the S end.

Ostrov Tit Luda (64°25'N., 36°06'E.), from which a light is shown, is a low, steep-to islet lying 4.5 miles ENE of Mys Beluzhiy, the N extremity of Ostrov Myagostrov.

Sumskaya Guba (64°21′N., 35°27′E.) is entered between Ostrov Sedostrov and the NE end of Ostrov Sumostrov, 5.5 miles W. Ostrov Sedostrov lies 1 mile NW of Mys Medvezhiy, the NW termination of a hill spur. Drying shoals lie between the island and the spur. Ostrov Razostrov lies in the entrance to Sumskaya Guba and is wooded. Vessels with drafts not exceeding 5m can anchor in the outer roadstead, 0.4 mile W of the SW end of Ostrov Razostrov. However, this anchorage is exposed to winds from between NW and NE.

Guba Virma (64°22'N., 35°12'E.), lying close W of Sumskaya Guba, is entered between Ostrova Parusnitsa and the NW end of Ostrov Sumostrov, 4 miles SSE. This bay mostly dries and is encumbered with numerous islets and rocks. The village of Virma stands at the mouth of a river which flows into the head of the bay. Range beacons, indicating the entrance to the bay, stand on two islets which lie 1.5 miles W of Ostrov Sumostrov.

Guba Kuz (64°26′N., 35°03′E.) lies NW of Guba Virma and is entered between Ostrov Tumishche (64°29′N., 35°00′E.) and a low islet, 4.5 miles SSE. This bay dries and is encumbered with numerous islets and rocks. A river, which flows into the SW corner of the bay, can only be used by boats. The village of Sukhoye stands on the N side of the river entrance.

Sorokskaya Guba (64°32'N., 34°54'E.) is entered between Mys Vygnavolok and Ostrov Molchanov, 6.5 miles S. The latter island lies close off the NE side of Ostrov Tumishche which is joined to the mainland. The port of Belomorsk lies at the head of this inlet and is backed by the town which stands near the mouth of Reka Vyg. A number of islets and rocks, some marked by beacons and buoys, lie in the approach to Sorokskaya Guba and can best be seen on the chart.

Belomorsk (64°32'N., 34°46'E.)

World Port Index No. 62830

2.19 The port is sheltered by two moles, which extend from the coast, and the harbor entrance is protected by two short, detached breakwaters.

The port is closed to foreign shipping. The entrance to the Belomorsk-Baltiyskiy Kanal, which connects the White Sea with Onezhskoye Ozero and the Baltic Sea, lies in the port. This canal, which is 125 miles long, has 19 locks and can be used by vessels with drafts of up to 4m.

Ice.—The head of Guba Sorokskaya and the Reka Vyg freeze over at the beginning of November and thaw at the beginning or middle of May. In general, navigation in winter, even with the aid of powerful ice breakers, is very difficult.

Depths—Limitations.—There are depths of 7.6 to 9.1m in the entrance of the port, between the breakwaters. However, the depths decrease inside the harbor to an average of 4.8m. A

main channel, about 2 miles long, extends from the entrance to the head of the harbor. It is 90m wide and marked by buoys.

The general cargo quay, on the NE side of the harbor, has 320m of berthage with a depth of 6.1m alongside. The cargo pier, on the SW side of the harbor, has a berth, 91m long, with a depth of 4.5m alongside. The fueling wharf, on the NE side of the harbor, has a berth, 70m long, with a depth of 6.1m alongside.

Several lumber loading wharves, up to 207m long, are situated in the harbor and have depths of up to 4.5m alongside.

Aspect.—Range lights, aligned 260°30', indicate the channel leading from the No. 1 lighted buoy to the outer anchorage, which lies 7.5 miles WNW of Ostrov Osinka.

A prominent television tower stands in position 64°32.4'N, 34°47.7'E. A radio mast is situated about 0.8 mile W of this tower. Chimneys stand about 1.2 miles SSW and 1.5 miles SSW of the tower.

Pilotage.—Vessels proceeding to Belomorsk, by way of the easternmost channel in Onezhskiy Zaliv, should embark a pilot near the lighted buoy moored W of Mys Letniy Orlov. Vessels proceeding into the bay, by way of the westernmost channel, should proceed toward Ostrova Rombaki, where pilots are available.

The station at Belomorsk provides pilots for vessels proceeding to Kem, Onega, and Mys Letniy Orlov.

Anchorage.—Vessels can anchor in the roadstead outside the harbor in depths of 6 to 11m. However, this anchorage is exposed to NE winds, which cause a heavy sea.

2.20 Ostrov Malyy Zhuzhmuy (64°37'N., 35°40'E.) lies 17 miles E of the N entrance point of Sorokskaya Guba. A light is shown from the SE extremity of the island. Some log huts stand on the N extremity of this island. A beacon stands on an islet which lies at the edge of a drying bank fronting the W side of the island.

Ostrov Bol'shoy Zhuzhmuy (64°41'N., 35°34'E.) lies 2 miles NW of Ostrov Malyy Zhuzhmuy. A light is shown from a structure standing 0.8 mile S of the N extremity of the island. A radiobeacon is situated at the light.

Banka Zhuzhmuyskaya lies 2 miles NNW of the light and has a least depth of 1.2m. It is marked by a lighted buoy on the N side and by a spar buoy on the S side. Ostrov Pulaya Luda, a bare and granite islet, lies 2 miles WSW of the light.

Ostrov Malyy Zhuzhmuy and Ostrov Bol'shoy Zhuzhmuy are almost connected by drying banks on which several islets are located.

Anchorage may be taken, during NE and E winds, off the SW side of Ostrov Bol'shoy Zhuzhmuy, in a depth of 20m. The best berth lies S of the W extremity of the island and W of the S extremity. A shoal patch, with a depth of 7.6m, lies about 0.2 mile WSW of this anchorage. Anchorage may also be taken, during winds from S to W, about 0.3 mile off the NE side of the island, in depths of 9 to 13m.

Ostrov Bol'shaya Sennukha (64°50'N., 35°37'E.) lies 9 miles NNE of Ostrov Bol'shoy Zhuzhmuy. This island is rocky and covered with tundra. The sides of the island are steep and bare up to the level of the tundra. A light is shown from the island.

Ostrov Malaya Sennukha, a bare rock, lies about 0.8 mile SE of Ostrov Bol'shaya Sennukha. Banka Vaterloo, lying 2 miles S

of Ostrov Bol'shaya Sennukha, has a least depth of 3m and is marked on its S side by a spar buoy.

Ostrov Rovnyazhiy (64°48'N., 35°15'E.), a peat-covered island with a similar islet lying close N, is located 9 miles W of Ostrov Bol'shaya Sennukha. A light is shown from a structure standing on this island. Banka Rovnyazh'ya, with a depth of 3.6m, lies 3.5 miles SE of the light and is marked by spar buoys on its W and E sides.

2.21 Ostrov Bol'shaya Nokhkaluda (64°49'N., 35°07'E.) lies 3 miles WNW of Ostrov Rovnyazhiy and is steep-sided with two summits. A beacon is situated on the W summit of the island. An above-water rock lies 1 mile SE of the island and a 2.6m shoal patch lies about 0.8 mile E of it.

Ostrov Beloguzikha lies 2.5 miles NNW of Ostrov Bol'shaya Nokhkaluda. This island is steep-sided and has a flat summit which is covered with trees and bushes.

Guba Shuyeretskaya (64°46′N., 34°54′E.), entered close S of Mys Poltamkorga, is an inlet indenting the N side of Ostrov Shuyostrov. Reka Shuya, which flows into the head of this inlet, can only be entered by small craft. A village stands 4 miles above the mouth of the river.

Anchorage can be obtained in the inlet in depths of 6 to 10m, good holding ground, but this roadstead can only be reached by passing through a narrow and unmarked channel. A number of islets, rocks, and shoals, which can best be seen on the chart, lie between Mys Poltamkorga and Guba Kemskaya, 8.5 miles NNW.

2.22 Guba Kemskaya (64°57'N., 34°45'E.) is entered N of Mys Pukhnavolok. A narrow and winding channel, with depths of 2 to 5m, leads between extensive drying banks to the mouth of Reka Kem', which lies at the head of this bay.

The bay is accessible at HW to vessels with drafts not exceeding 2.7m. Local knowledge is required. The town of Kem' stands at the head of the bay, on the N side. A pier, which projects from the S shore of the bay, has a depth of 2m alongside at HW.

Proliv Kemskaya Salma (65°00'N., 34°47'E.) separates Ostrov Yakostrov from the S part of Ostrov Rabocheostrovsk. This channel is relatively deep and may be transited by vessels with drafts not exceeding 5m. A beacon stands at the SW end of Ostrov Yakostrov.

2.23 Port Kem' (64°59'N., 34°47'E.) lies on the W side of Proliv Kemskaya Salma. Lumber is the chief export of this port which is administered by the Onega port authority. It is reported (1996) that this port is closed to foreign vessels from 1 September to 31 December annually.

Winds—Weather.—The winds are generally NE from March to June, and S, W, and NW from August to February.

Ice.—The entrance channel ices in the middle of November and opens at the end of April.

Tides—Currents.—The flood tidal current at HW enters the strait from N and NE, attaining a velocity of 2 knots. The ebb current attains a slightly greater velocity.

Depths—Limitations.—Wharves extending N and S of the sawmill provide 1,200m of total berthage. Vessels of up to 6.4m draft can be accommodated at the lumber mill pier. Towed ships and lighters are berthed between the piers.

Pilotage.—Pilotage is compulsory. The pilot station for Port Kem' is situated on Ostrov Racheostrovsk. Foreign vessels bound for this port should embark pilots at Mys Letniy Orlov. Vessels approaching from the N, through Proliv Zapadnaya Solovetskaya Salma, can embark pilots by prior request off Ostrov Yuzhnyy Rombak (65°02'N., 35°02'E.).

Anchorage.—Anchorage can be obtained in the S part of Proliv Kemskaya Salma in depths of 5 to 11m, mud. This anchorage is sheltered from all winds, except those from NE and S, and is not subject to heavy seas.

Caution.—A rocky shoal, with a least depth of 2.6m, lies close E of the northernmost wharf in the port and is marked by four buoys.

2.24 Ostrov Oleshin (64°58'N., 35°13'E.), the island lying nearest to Proliv Zapadnaya Solovetskaya Salma, is rocky, steep, and covered with peat. Ostrov Luda Saltykovka, lying 1.8 miles WNW of the island, is a low, granite rock which can be passed on all sides.

Ostrov Nemetskiy Kuzov (64°57'N., 35°10'E.), 136m high, is very steep at its E and S sides. This island is bare except for some trees standing on its S side. Small vessels can anchor in depths of 6 to 7m, sand and stones, in the middle of the outer part of a cove indenting the S side of the island.

Ostrov Russkiy Kuzov (64°56'N., 35°08'E.) lies close SW of Ostrov Nemetskiy Kuzov. The sides of this island are wooded, but its summit is bare. Ostrov Tupichikha, an island lying close S of Ostrov Russkiy Kuzov, is covered with peat and is steep-to on its N side. A beacon surmounts the summit of this island.

Ostrov Yuzhnyy Rombak (65°02'N., 35°02'E.), lying 6 miles NW of Ostrov Oleshin, is steep and high. A light is shown from the S part of this islet. Stamik Bol'shoy Rombakskiy, a shoal, has a least depth of 1.5m and lies 1.2 miles ESE of the light.

Ostrov Malyy Rombak, from which a light is shown, lies 0.3 mile S of Ostrov Yuzhnyy Rombak and is bare and rocky.

Ostrova Topy (64°59'N., 35°27'E.) lies on the E side of Proliv Zapadnaya Solovetskaya Salma, 6 miles ENE of Ostrov Oleshin, and consists of two islets covered with peat. A light is shown from the N islet. Shoal patches, some of which are marked by buoys, extend up to 12 miles NNW from these islets.

Ostrova Studentsy (65°05'N., 34°49'E.) consists of an island, the S part of which is wooded, and several islets. The channel lying between Ostrova Studentsy and the mainland is foul. Ostrov Zelenaya Luda, a barren islet, is located 4 miles N of Ostrova Studentsy and a shoal, with a depth of 2.4m, lies 1 mile ESE of it.

2.25 Letnyaya Reka (65°09'N., 34°38'E.), a village, is situated on the S side of the mouth of a river, at the head of a bay, which is entered N of Ostrov Kamostrov. The bay is encumbered with rocks and shoals which are separated by narrow channels. Range beacons indicate the fairway leading to an outer anchorage off the village. Vessels with drafts of less than 5m can obtain anchorage off the bay, in depths of 7 to 9m, over a bottom of mud, sand, and stones.

Stamik Rivenskiy (65°16′N., 34°47′E.), 7.5 miles N of Ostrov Zelenaya Luda, is a drying rock which is marked on its

E side by a spar buoy. Stamik Aleksandrovskiy, which also dries, lies about 2 miles W of Stamik Rivenskiy. Ostrov Serebryanka, marked by a beacon, lies 2.8 miles S of Stamik Aleksandrovskiy.

Ostrov Khenekorgskiy Stamik (65°24'N., 35°01'E.), a group of rocks rising just above water, lies 9.5 miles NE of Stamik Rivenskiy. Vessels should not pass closer than 2 miles from this group, which is marked by a light.

2.26 Guba Pon'goma (65°22'N., 34°32'E.) is entered between Mys Pon'goma Navolok and Mys Khennoy Navolok, 7.5 miles NE. The village of Pon'goma stands close within the entrance of a creek, which flows through the S shore of the bay 3.5 miles WNW of Mys Pon'goma Navolok. Both shores of the bay are low and covered with trees near the entrance. The coves indenting the bay have rocky bottoms. Guba Pon'goma freezes at the beginning of November and opens again in the middle of May.

Ostrov Vysokaya Luda (65°19'N., 34°34'E.), an islet, lies 1 mile ESE of Mys Pon'goma Navolok. Some drying rocks lie about 0.8 mile E of this islet.

Ostrov Divinskaya Luda (65°24'N., 34°39'E.), a mosscovered islet, is located 2.5 miles SW of Mys Khennoy Navolok. A shoal, with a depth of 0.4m, lies 1 mile ESE of this islet. A drying rock, lying 2 miles SSW of the islet, is located at the SE end of an area of foul ground which extends seaward from the NW shore of Guba Pon'goma. Range beacons indicate the approach to the anchorage within Guba Pon'goma. Anchorage may be taken close ESE of the front range beacon, in depths of 11 to 15m. Anchorage can also be taken close N of the rear range beacon in depths of 11 to 15m.

Mys Khennoy Navolok (65°26'N., 34°40'E.) is the NW entrance point of Onezhskiy Zaliv. Ostrov Khennoy, with a beacon standing on its E side, lies close S of this point.

Mys Khennoy Navolok to Mys Kirbey Navolok

2.27 Ostrov Syrovatka (65°30'N., 34°44'E.) lies close off the coast, 4.5 miles NNE of Mys Khennoy Navolok. Mys Kamennyy lies 4.5 miles NNE of this islet. Mys Solomennyy, a point rising to an isolated hill, is located 6.8 miles NNE of Mys Kamennyy. Ostrova Rob'yaki, consisting of two islets, lies 2.8 miles S of Mys Solomennyy. Both of these islets have steep cliffs and are conspicuous because of their reddish color. Ostrov Bol'shoy Rob'yak, the larger of the two islets, is marked by a lighted beacon. Anchorage, sheltered from N winds, can be obtained 0.5 mile SW of this islet, in depths of 10 to 18m, mud

Ostrov Sambaluda (65°39'N., 35°14'E.) is a small, rocky islet covered with tundra and moss. A light is shown from this islet. A radiobeacon is situated at the light.

Sambaludskiy Stamik, lying 5.8 miles ENE of Ostrov Sambaluda, is a group of steep-to, drying rocks which should be given a wide berth. A lighted buoy is moored about 0.8 mile ESE of the group.

Caution.—As there are numerous rocks and shoals lying between Ostrov Sambaluda and the coast, vessels are warned not to use the passage leading between them.

Guba Kalgalaksha (65°40'N., 34°49'E.), entered between Mys Kamennyy and Mys Solomennyy, is a shallow inlet on the SW side of which lies Ostrov Oleniy. This inlet is encumbered with numerous islets and rocks, the largest of which are covered with shrubs and moss. A narrow channel, used by small craft, leads along the E shore. A village stands on the W shore of the inlet, 8 miles from Mys Solomennyy. The inlet freezes at the beginning of November and opens again in the middle of May.

Ostrov Luda Nakhkonitsa (65°48'N., 35°02'E.) lies 2 miles offshore, 8.3 miles NNE of Mys Solomennyy. A light is shown from this islet. Due to numerous rocks and shoals, vessels should not approach within 1 mile of the islet.

Guba Gridina (65°56'N., 34°43'E.) is entered between Mys Tolstik and Mys Kirbey Navolok, 5.5 miles NNW. Numerous rocks and shoals encumber the greater part of this bay. A village stands on the NW shore of a cove, which lies close S of a river mouth, on the W shore of the bay. Range beacons indicate the channel leading into the bay.

Anchorage can be obtained on the alignment of the range beacons in depths of 13 to 18m, rock, about 0.6 mile from the front beacon. Anchorage can also be taken in depths of 5.5 to 7.3m about 0.2 mile from the front beacon.

Mys Kirbey Navolok (65°58'N., 34°42'E.), the SW entrance point of Kandalakshskiy Zaliv, is steep, bare, and reddish-colored in its lower part. A light is shown from a structure standing on this point.

Kandalakshskiy Zaliv

2.28 Kandalakshskiy Zaliv (66°30'N., 33°55'E.), extending 90 miles NW, is entered between Mys Kirbey Navolok and Mys Ludoshnyy, 35 miles NE. The highest land bordering the White Sea backs the E shore of this gulf, 14 miles ESE of the town of Kandalaksha. The inshore waters of the gulf are encumbered with islets and reefs, especially near the head. Ice forms in the gulf at the beginning of November and clears in the middle of May. The gulf contains some of the deepest water in the White Sea.

Caution.—Firing Area No. 53 is bounded by the coastline and lines joining the following positions:

- a. 66°37'48"N, 34°22'45"E.
- b. 66°37'48"N, 34°22'30"E.
- c. 66°36'00"N, 34°21'21"E.

Southwest Shore of Kandalakshskiy Zaliv

2.29 The coast trends uniformly NW for 22 miles from Mys Kirbey Navolok to Mys Sharapov, with no off-lying islands. The coast gradually increases in height near Mys Sharapov. This section of the coast is comparatively little indented and steep-to with all known dangers lying within 1 mile of the shore.

Mys Sholombrodskiy (66°02'N., 34°36'E.), located 5 miles NW of Mys Kirbey Navolok, is bare, sloping, and reddish in color. Mys Orlov lies 1.2 miles NW of this point.

Guba Sukhaya, entered on the W side of Mys Orlov, is encumbered with rocks and dries. The entrance of this inlet can be identified by its black cliffs.

Mys Sharapov (66°14'N., 34°05'E.), 22 miles NW of Mys Kirbey Navolok, is a bare and reddish, granite point, which slopes steeply. This point, from which a light is shown, is conspicuous and can be easily identified from any direction.

Guba Nikol'skaya (66°13'N., 33°56'E.) is a cove entered 3.8 miles W of Mys Sharapov. Ostrov Sosnovets, with a small islet lying close E of it, and another small wooded island, lie in the entrance of this cove. Anchorage can be obtained 0.2 mile off the wooded island in a depth of 11m. Proliv Glubokaya Salma, entered N of Ostrov Sosnovets, has a least width of 0.4 mile. This strait is deep in the middle and clear of dangers except for a shoal, with a depth of 13m, and a drying rock which lie on the SW side of the fairway channel.

2.30 Proliv Bol'shaya Salma (66°18'N., 33°50'E.) is the strait formed between the N side of Ostrov Pezhostrov and the S side of Ostrov Keret', and the islets lying E of it. This strait leads into the roadstead off Keret' and its fairway channel has depths of more than 20m and is clear of dangers.

Ostrova Dvinskiye Luba, on which a lighted beacon is situated, lies close off the E end of Ostrov Pezhostrov. A shallow bank extends seaward from the N side of this island.

Bol'shoy Keretskiy Reyd (66°17'N., 33°45'E.) lies W of the junction of Proliv Glubokaya Salma and Proliv Bol'shaya Salma, at the W extremity of Ostrov Pezhostrov. This roadstead has general depths of 10 to 70m and is sheltered from all winds except those from the E. Ostrov Keret', 5 miles long, lies on the N side of Bol'shoy Keretskiy Reyd. Anchorage can be taken in a depth of 12m, sand and gravel, S of this island.

Guba Keret' (66°17′N., 33°37′E.), a small and landlocked inlet, is entered N from Bol'shoy Keretskiy Reyd. Reka Keret' flows into the head of this inlet. The port area for Keret' lies on the W side of an islet and only the village of Keret' stands near the entrance to the river.

Ice.—The inlet and its entrance freeze at the beginning of November and are not navigable until the middle of May.

Aspect.—Several ranges indicate the entrance channel.

Pilotage.—Pilotage is compulsory. Vessels bound for Guba Keret' should send an ETA to the Captain of the Port 24 hours in advance and then confirm the time, with a request for a pilotage, 4 hours before arrival. Pilots will board vessels off Ostrov Borshovets.

Anchorage.—Vessels can anchor in Bol'shoy Keretskiy Reyd, between the S side of Ostrov Kerets' and Ostrov Sredniy, in depths of 14 to 31m, mud.

Anchorage can also be taken off the mouth of Reka Keret' in depths of 7 to 9m.

Keret (66°17'N., 33°33'E.) (World Port Index No. 62860) is a village standing on the N side of Reka Keret'. The port area of Keret' lies on the W and NW sides of Ostrov Sredniy.

The main wharf fronts the NW shore of Ostrov Sredniy. It has a berth, 138m long, with a depth of 6.8m alongside. There is also a lumber wharf which provides 256m of berthage with depths of 3.6 to 5.5m alongside.

2.31 Ostrova Kem' Ludy (66°25'N., 33°50'E.) is a group of low, granite islets lying 4 miles N of Ostrov Sidorov. A light is shown from a structure standing on the largest islet of the

group. A bank, with a depth of 10.8m, lies 1 mile SSE of the light. A stranded wreck lies 0.5 mile SE of the light.

Guba Chupa is entered between the NW extremity of Ostrov Sidorov and Mys Kartesh, 3.2 miles WSW. This inlet extends 17 miles WSW and has a deep fairway. It has depths of 10 to 60m which decrease uniformly from the entrance to the shores. Both shores of the inlet are high and rocky. Range beacons indicate the approach to the inlet and the fairways within it. Vessels, with local knowledge, can anchor in convenient depths between Ostrov Sidorov and a group of islets and rocks, lying 1 mile W.

Guba Kiv is entered between Mys Kartesh and Mys Krasnyy, 4.5 miles NNE. A beacon stands on a hill, 1 mile W of Mys Krasnyy. Anchorage can be taken by vessels, with local knowledge, near the head of this bay. However, the anchorage is not recommended as the bay is open to E winds and the depths are considerable and irregular. Guba Kiv freezes in November and clears again at the end of May.

Banka Severnaya (66°26'N., 33°46'E.), with a depth of 0.7m, lies 2.8 miles NW of the light on Ostrova Kem' Ludy. Anchorage can be obtained between this bank and the N side of Ostrov Kemludskiy in depths of 8 to 17m, mud and stones.

2.32 Proliv Velikaya Salma (66°30'N., 33°25'E.) is entered between Mys Kuzokotskiy and Mys Korozhnyy, 3.8 miles NW. This strait extends WNW for 10 miles and leads between the S side of Ostrov Velikiy and the mainland. A beacon stands on an islet which lies 0.4 mile SE of Mys Korozhnyy. A spar buoy marks a shoal bank which lies 1.8 miles E of the beacon. Guba Kuzokotskaya, entered on the S side of Proliv Velikaya Salma, affords shelter, with good holding ground, to vessels with local knowledge.

Guba Chernaya (66°31'N., 33°00'E.) is entered close S of Mys Kindo and mostly occupied by Ostrov Olenevskiy, a low, rocky, and wooded island. The island divides the inlet into two arms which have narrow entrances.

Vessels, with local knowledge, can anchor 0.5 mile NNE of the E extremity of the island in depths of 13 to 16m. Small craft can anchor close S of the W extremity of the island in depths of up to 7m, sheltered from all winds.

Guba Rugozerskaya, lying at the head of Proliv Velikaya Salma, is entered between Mys Kindo and the SW side of Ostrov Velikiy.

The shores of the cove are wooded and rocky, it is encumbered with numerous rocks and islets. Local knowledge is required.

Mys Titov (66°38'N., 33°19'E.), a prominent point, is located 9 miles NW of Mys Korozhnyy. A lighted beacon stands on this point.

Ostrov Naumikha, from which a light is shown, lies 4 miles NNW of Mys Korozhnyy. Ostrova Sredniye Ludy, a group of steep and above-water rocks, lies about 5 miles ENE of this island. A light is shown from the largest rock of the group.

A number of shoal banks lie between Ostrov Naumikha and Ostrova Sredniye Ludy and can best be seen on the chart.

2.33 Guba Kovda (66°43'N., 32°57'E.), an extensive bay, is entered between Mys Kostylev and Mys Tolstik, 8.5 miles NW. The bay is encumbered with many dangers, but anchorage can be taken in a number of places. Ostrov Oleniy, an island, is

3 miles long and occupies the greater part of the head of the bay.

Ice.—In an average winter, the bay freezes in November and remains so until the end of May.

Tides—Currents.—The average rate of the currents in the area of the bay is 0.5 knot.

Depths—Limitations.—The fairway channel leading into Guba Kovda and to the various anchorages passes between a number of islets, rocks, and shoals. Local knowledge is required.

Aspect.—The reaches of the fairway are indicated by ranges. Many of the dangers lying near the fairway channel are marked by buoys. A lighted range indicates the approach to the bay.

Reka Kovda flows out through the SW shore of the bay. The village of Kovda stands along both sides of the outlet of this river.

Pilotage.—Pilotage is compulsory. Vessels bound for Guba Kovda should send an ETA to the Captain of the Port 24 hours in advance and a confirmation message, with a request for pilotage, 4 hours before arrival. A pilot station stands on the N extremity of Ostrov Mikkov. Pilots can be contacted by VHF and board vessels in the outer roadstead.

Anchorage.—Vessels can obtain anchorage in the outer roadstead, between the N shore of Guba Kovda and the chain of islets which extend E from Ostrov Ovechiy. This roadstead has depths of 14 to 26m over a bottom of mud. The best anchorage lies 0.8 mile ENE of the N extremity of Ostrov Ovechiy. The inner roadstead affords anchorage for vessels with local knowledge.

Kovda (66°41'N., 32°52'E.) (World Port Index No. 62870), a village, is situated at the entrance to Reka Kovda in the SW part of Guba Kovda. It is fronted by the principal port for the area. Vessels with drafts of up to 6.7m can berth alongside a wooden wharf fronting the sawmill on the S side of Ostrov Ovechiy. Vessels with drafts of up to 6m can berth alongside another wooden wharf fronting the sawmill on the N side of the island.

2.34 The coast between Mys Tolstik and Mys Nishchevskiy, 7.5 miles NW, is wooded and rocky. Mys Popovka and Mys Verkhnavolok, located 1.5 and 3.8 miles, respectively, NW of Mys Tolstik are both steep and conspicuous points.

Ostrov Vachev (66°47'N., 32°55'E.) lies 1.5 miles E of Mys Verkhnavolok and contrasts sharply with its surroundings due to its height and dark color. A light is shown from a structure standing on the NW extremity of this island. A shoal bank lying 0.5 mile W of this light is marked by a spar buoy.

Proliv Vachevskaya Salma (66°46'N., 32°54'E.) is the strait lying between the mainland and Ostrov Vachev. The tidal currents in this strait attain rates of 1.5 knots and NW winds blow with great force. Small vessels can anchor in the strait close SW of Ostrov Vachev.

Guba Nishchevskaya (66°48'N., 32°42'E.) lies 2.5 miles W of Mys Verkhnavolok. This cove affords anchorage to small craft, with local knowledge, in depths of 5 to 8m. Ostrov Peschanka, which is moderately high and covered with peat, is

the northernmost of numerous islets and rocks which lie E and NE of Mys Nishchevskiy. A beacon stands on the S side of this islet. Ostrova Rogovye Ludy, a group of low rocks and sand cays, lies 2 miles NNW of the above beacon. Ostrov Drestnoy Baklysh, from which a light is shown, is a bare, steep skerry lying 3.2 miles NW of Ostrov Peschanka.

Guba Knyazhaya (66°53'N., 32°27'E.) is entered between Ostrov Krestovyy and a point, 0.8 mile WNW. Both shores of this inlet are rocky and steep-to, except on the S side of the entrance. Ostrov Krestovaya Luda, lying 1 mile ENE of Ostrov Krestovyy, is a bare, granite island with steep shores.

A fish haven fronts the NW shore of the inlet and a small pier projects from the S shore. The Knyazhgubskaya hydroelectric power plant is situated in the vicinity of the inlet and is prominent. A village stands at the mouth of a river, at the head of the inlet.

Anchorage, sheltered from all winds and with good holding ground, can be obtained in any part of the inlet. The inlet freezes in November and clears at the end of May.

Ostrov Sedlovataya (66°55'N., 32°38'E.), an islet, lies 2.8 miles NE of Ostrov Krestovyy and is marked by a lighted beacon. Sedlovataya Ludy, an island, lies 1.8 miles NE of this islet and is surrounded by drying rocks and shallow water.

Ostrov Voley (66°55'N., 32°33'E.) lies 1.5 miles W of Ostrov Sedlovataya. Guba Kapshina, an inlet, is entered 1.5 miles N of this island and provides anchorage to vessels with local knowledge. The depths decrease gradually from 29m in the entrance of the inlet to 6m near the head.

Head of Kandalakshskiy Zaliv

2.35 The head of Kandalakshskiy Zaliv, extending 12 miles NW from a line joining Ostrov Voley and Guba Kolvitsa, is much encumbered by islands, islets, and rocks, which can best be seen on the chart.

Proliv Kibirinskaya Salma is the principal channel used for approaching Kandalakshskiy Reyd, the roadstead lying off the town of Kandalaksha. It leads NW between the E shore and a chain of islets lying in the middle of the gulf.

Guba Palkina (67°03'N., 32°21'E.), lying on the W side of the head of the gulf, is entered between a point, located 9 miles NNW of the beacon on Ostrov Sedlovataya, and Mys Voronishnyy, 2.2 miles NW. Numerous islets and rocks fringe both entrance points. The only channel leading into this inlet passes S of Ostrov Glov, a wooded islet, which lies 1.2 miles SE of Mys Voronishnyy.

Anchorage can be taken in Guba Palkina in depths of 11 to 13m about 0.6 mile from the head. However, due to the presence of unmarked dangers, care must be taken when approaching this anchorage.

Guba Kanda (67°08'N., 32°25'E.) is entered N of a point lying 3 miles NW of Mys Voronishnyy. This inlet is encumbered with numerous islets and rocks and should not be used. A bridge spans the inlet, close inside the entrance.

Proliv Kibirinskaya Salma (66°58'N., 32°49'E.) is the only practicable channel leading to Reyd Kandalakshskiy. The route through this channel is indicated by four sets of range lights. Kibirinskiy Ludy Range, the first leg of the channel, aligns a course of 327°06'; Vonyuchiy Range, the second leg, aligns a course of 344°30'; Krestovyye Range, the third leg, aligns a

course of 317°54'; and Kandalakshskiy Range, the final leg, aligns a course of 296°12' and indicates the fairway leading to abreast the town of Kandalaksha.

Kandalakshskiy Reyd (67°08'N., 32°23'E.), lying between the line joining the front beacon of the Kandalakshskiy Range and the NE shore of the gulf, is the anchorage area for Kandalaksha. Large vessels usually anchor 0.2 mile off the NE shore in depths of 11 to 18m. The best anchorage for small vessels lies off a small indentation on the E side of the mouth of Reka Niva, in depths of 11 to 18m.

2.36 Kandalaksha (67°08'N., 32°25'E.) (World Port Index No. 62890) stands along both banks of Reka Niva, close within the entrance.

Ice.—The port freezes over from the beginning of November to the end of May.

Tides—Currents.—The tides rise about 2.5m at springs and 1.6m at neaps. The tidal currents attain rates of 0.5 knot to 1.5 knots

Depths—Limitations.—The least depth lying on the range lines is 8m. No. 1 Pier, the northernmost pier, is 130m long and has a depth of 5.5m alongside. No. 2 Pier, the southernmost pier, provides a berth, 115m long, with a depth of 5.5m alongside. Nos. 3 and 4 Piers are 109 and 110m long, respectively, and have depths of 7m alongside.

Two floating piers, situated directly N of No. 1 Pier, are both 112m long and have depths of 9m alongside.

No. 9 Pier, situated 0.5 mile ESE of Mys Smol'nyy Navolok, is used for loading ore. It is 115m long and has a depth of 3.6m alongside. Vessels up to 7.5m draft can be accommodated alongside.

Pilotage.—Pilotage is compulsory for all foreign vessels and vessels with drafts over 4m. Pilots are available 24 hours. Requests for pilotage should be sent 12 and 4 hours prior to arrival. Pilots board about 1 mile SE of Gorelyy Islands or in position 66°54'12"N, 32°42'18"E. Vessels should also send an ETA at least 24 hours in advance.

2.37 Guba Kolvitsa (67°04′N., 32°52′E.), lying 9.5 miles SE of Kandalaksha, is entered between Mys Dmitriyev and Mys Kolvitsa, 1.8 miles NW. A village stands on the N side of the mouth of a river which flows into the head of this inlet. A spar buoy marks the seaward edge of a bank lying on the S side of the entrance to the inlet. Anchorage can be obtained off the village in depths of 11 to 16m.

Ostrova Kibirnskiye Ludy, a chain of four granite skerries, lies 2 miles W of Mys Maksimov (66°56'N., 32°55'E.). Banka Kiberskaya Korga, which dries and is steep-to, lies 1.5 miles SW of this chain. Banka Pentel'skaya Korga, lying about 1 mile WSW of Mys Pentel'skiy, consists of sand and stone. This bank, which dries, is steep-to and is marked on its S side by a spar buoy. The sea breaks over this bank at HW during a fresh breeze. A shoal patch, with a depth of 13.6m, lies 5 miles WNW of Mys Pentel'skiy.

Ostrova Rezanovy Ludy (66°47'N., 33°16'E.), consisting of two low skerries covered with peat, lies 3.5 miles SE of Mys Pentel'skiy. A light is shown from the SE skerry. Banka Tzar, lying 1.5 miles SSW of the above light, has a least depth of 3.3m and is marked on its S side by a lighted buoy.

Mys Kochinny (66°43'N., 33°30'E.), from which a light is shown, is wooded and moderately steep. This point is located 3 miles WNW of Mys Pedunov (66°42'N., 33°28'E.), the W entrance point of Guba Por'ya.

Guba Por'ya (66°45′N., 33°42′E.) is entered between Mys Pedunov and Mys Shombach, a high and bare cliff of reddish granite, 7 miles E. The shores of this inlet are indented by a number of extensive bights. Guba Por'ya freezes in November and clears in May. Vessels can winter within some of the large bights.

2.38 Ostrov Bol'shoy Sedlovatyy (66°42'N., 33°40'E.), the most seaward of a chain of islets and rocks extending nearly 1 mile SE from Mys Pedunov, is high and wooded. A light is shown from the S end of this islet.

Ostrova Stolbovyye Ludy is a group of three bare, granite skerries lying 3.5 miles WSW of Mys Shombach. A light is shown from the middle skerry. Ostrova Krestovyye, consisting of two bare and rocky islets, lies 0.8 mile SW of Mys Shombach. Ostrov Palenyy, lying 0.2 mile W of the W islet of Ostrova Krestovye, is also rocky and bare.

Guba Tar is entered between Mys Shombach and an islet, 1 mile W. This latter islet lies at the S end of a chain of islets and rocks extending seaward from the mainland. Small craft can anchor 0.4 mile from the head of Guba Tar.

Guba Vostochnaya Por'ya (66°45'N., 33°48'E.), lying at the E side of Guba Por'ya, is entered between Mys Glubokiy and the S extremity of Ostrov Gorelyy, 1.5 miles NW. A light is shown from a structure standing on Ostrov Gorelyy. Anchorage can be obtained in the center of this inlet in depths of 50 to 90m.

2.39 Guba Lov (66°42'N., 34°03'E.), an inlet, is entered 3 miles E of Mys Shombach. It extends 4 miles N and is flanked by rocky cliffs. Ice forms in the inlet in November and clears in May. The tidal currents in the inlet are weak.

The entrance is clear of dangers except for an isolated depth of 4m which lies 0.4 mile WNW of the E entrance point. Small vessels can anchor 2.5 miles within the entrance, in a depth of 22m

Guba Pil'skaya (66°41'N., 34°07'E.) is entered between Mys Pil'skiy and a point, 0.8 mile WNW. Porozhki Narrows lies in the central part of this bay and has depths of 6 to 12m. Tidal currents in the bay attain rates of 3 to 3.5 knots in the narrows. Range beacons, bearing 027°42', stand on a point on the W shore and indicate the channel leading into the bay. Sheltered anchorage can be taken in a cove, which lies 0.8 mile NE of Mys Pil'skiy, in a depth of 14m, silt. Vessels with drafts not exceeding 4.6m can anchor near the head of the bay.

Guba Ostrovskaya (66°41'N., 34°10'E.), entered 1.8 miles E of Mys Pil'skiy, is flanked by cliffy, wooded shores. An islet, lying close to the W entrance point, has bare, reddish cliffs and is sparsely wooded. Small craft can anchor in a depth of 14m within the southernmost of two small coves indenting the W side of the inlet, 0.5 mile from the entrance.

Guba Padan (66°41'N., 34°14'E.), an inlet, lies with its entrance located 1 mile E of the entrance to Guba Ostrovskaya. The shores of this inlet are high, especially on the E side. Anchorage can be obtained in a depth of 20m, mud, abreast a

high, steep hill which projects from the W shore of the inlet, 2 miles from the entrance.

Guba Umba (66°40'N., 34°18'E.) is a small inlet used only by small craft. Its entrance lies about 2 miles E of the entrance to Guba Padan. The village of Umba stands on the W shore of the inlet and is prominent.

Guba Malaya Pir'ya, an inlet, lies 0.5 mile E of Guba Umba. A shoal, with a depth of 4.3m, lies 0.2 mile SW of the E entrance point and is marked by a spar buoy. A drying rock lies 0.2 mile SW of the W entrance point. Range beacons stand on the W shore of the inlet, 1 mile N of the W entrance point, and, bearing 009°, indicate the channel leading into the inlet. A village stands at the W end of a narrow channel which connects this inlet with Guba Bol'shaya Pir'ya. Anchorage can be obtained in a depth of 12m, mud, abreast the post office situated in the village.

2.40 Guba Bol'shaya Pir'ya (66°40'N., 34°21'E.), a narrow inlet, extends 2.5 miles N from its entrance, which is located 1 mile N of Mys Budrach. The inlet is considered the best place for a vessel to winter in Kandalakshskiy Bereg. A light is shown from a structure standing on the W entrance point. Lighted ranges, bearing 004°30' and 018°15', indicate the channel leading through the inlet to the head. Spar buoys mark the outer edges of the shore banks which extend from both sides of the inlet.

Pilotage.—Pilotage is compulsory. Vessels bound for Guba Umba should send an ETA to the Captain of the Port 24 hours in advance and a confirmation message, with a request for pilotage, 4 hours before arrival. The pilot station, for vessels bound for Guba Bol'shaya Pir'ya and the inlets lying W as far as Guba Pil'skaya, is situated on Ostrovok Nablyudeniya. The inlet freezes between November and May.

Anchorage.—Vessels can anchor 0.3 mile NE of Ostrovok Nablyudeniya in depths of 13 to 18m, mud and stones. A more sheltered anchorage lies in the wider part of Guba Bol'shaya Pir'ya in depths of 11 to 16m, mud and stones.

Guba Sosnovaya (66°38'N., 34°26'E.) is an inlet entered around the N end of Ostrov Vol'ostro. This inlet extends 2.8 miles E from its entrance, which is 1 mile wide. The shores are high and wooded. Anchorage can be taken in the middle of the inlet in depths of up to 22m, good holding ground.

Ostrov Vol'ostrov (66°37'N., 34°20'E.) lies 2 miles S of the entrance to Guba Bol'shaya Pir'ya. The shores of this island are bare and reddish in color which makes it easy to identify against the woods standing on the peninsula behind it. A light is shown from the W side of the island. A rock, with a depth of

2.9m, lies 0.4 mile W of the island and is marked by a spar buoy.

Anchorage can be obtained off the N entrance of the strait that separates this island from the mainland, in depths of 15 to 18m, mud and sand. Anchorage can also be taken in the S entrance of this strait in depths of 10 to 15m, but this roadstead is exposed to S winds.

Mys Turiy (66°32'N., 34°30'E.), from which a light is shown, lies 6 miles SE of Ostrov Vol'ostrov. This point is the S extremity of a peninsula which is steep-to on all sides. The peninsula is mostly wooded, but bare, reddish granite shows through in places. Kuzreka, a village, is situated on the E side of the mouth of a river which lies 8.5 miles NE of Mys Turiy. Small craft can enter the river at HW and anchor off the village. Range beacons, bearing 017°°, indicate the approach to the anchorage.

Caution.—A Regulated Area, into which entry is prohibited, extends 3.5 miles S into the fairway from the vicinity of Mys Turiy.

2.41 Guba Olenitsa (66°27'N., 35°17'E.), a bay, lies 19 miles ESE of Mys Turiy and its entrance is 4 miles wide. Both entrance points are wooded, but the shores of the bay are low and swampy. The village of Olenitsa stands on the E bank of a river which flows into the head of the bay. A bare spot, located on the slope of a hill behind the village, forms a good landmark. Several shallow shoals, the positions of which are doubtful, lie off the approach to the bay and may best be seen on the chart.

The main channel, which leads to the anchorage area, has a least depth of 5.4m. Anchorage can be obtained by vessels, with drafts of up to 5m, close SW of the mouth of the river. This roadstead has a depth of 5.4m over a bottom of silt, sand, and stones. However, the anchorage is not safe during strong winds from between S and W.

Banka Marniks, a rocky shoal, has a least depth of 3.8m and lies 1.5 miles offshore, 7.5 miles SE of the E entrance point of Guba Olenitsa. A bank, with a depth of 1.4m, lies 0.6 mile E of Banka Marniks and several dangerous wrecks lie in its vicinity.

Sal'nitsa, a coastal village, stands 2.8 miles WNW of Mys Ludoshnyy, the N entrance point of Kandalakshskiy Zaliv. This village is situated on the E bank of Reka Sal'nitsa. A prominent building, formerly a chapel, stands on the E entrance point of the river.

The coast extending E of Mys Ludoshnyy is described in Sector 1.